

FILE NO.

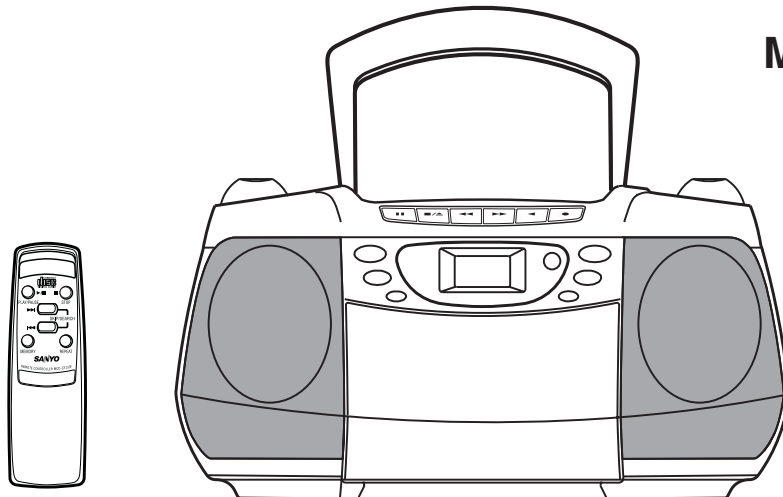
Service Manual

CD Portable Radio Cassette Recorder

MCD-ZX250F(BL)
(XE)

MCD-ZX250F(WH)
(XE)

MCD-ZX250F (UK)



CONTENTS

PRODUCT CODE No.

164 128 02 250F(BL)/XE
164 128 13 250F(WH)/XE
164 128 01 250F/UK

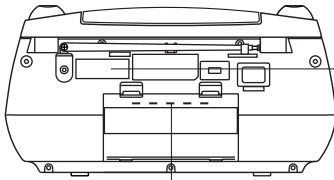
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LASER BEAM SAFETY PRECAUTION

• Pickup that emits a laser beam is used on this CD section.


CAUTION :
USE OF CONTROLS OR ADJUSTMENTS OR
PERFORMANCE OF PROCEDURES OTHER
THAN THOSE SPECIFIED HEREIN MAY RESULT
IN HAZARDOUS RADIATION EXPOSURE.

LASER OUTPUT 0.6 mW Max. (CW)
WAVE LENGTH 790 nm



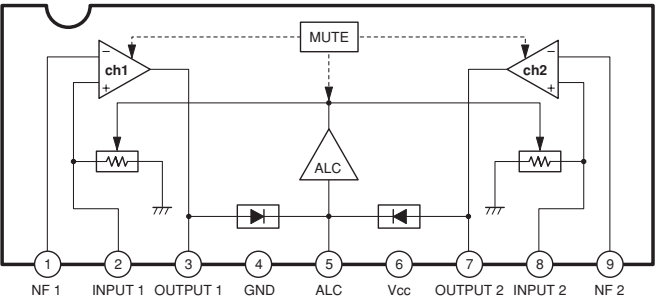
CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

CAUTION-INVISIBLE LASER RADIATION WHEN OPEN AND
INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL-USYNLIG LASER STRÅLING VED ÅBNING, NÅR
SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ
UDSÆTTELSE FOR STRÅLING.
VARNING-OSYNLIG LASER STRÅLNING NÅR DENNA DEL
ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR
FÄRLIG.
VORSICHT! -UNSICHTBARE LASERSTRAHLUNG TRITT
AUS. WENN DECKEL GEÖFFNET UND ENN
SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT,
DEM STRAHL AUSSETZEN.
VARO !-Avattaessa ja suojalukitus ohitettaessa olet alttiina
näkyvättömälle lasersäteilylle. Älä katso säteeseen.

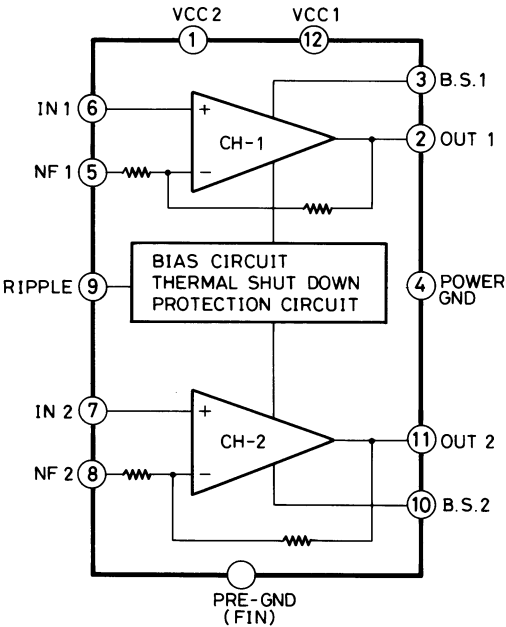


IC BLOCK DIAGRAM & DESCRIPTION

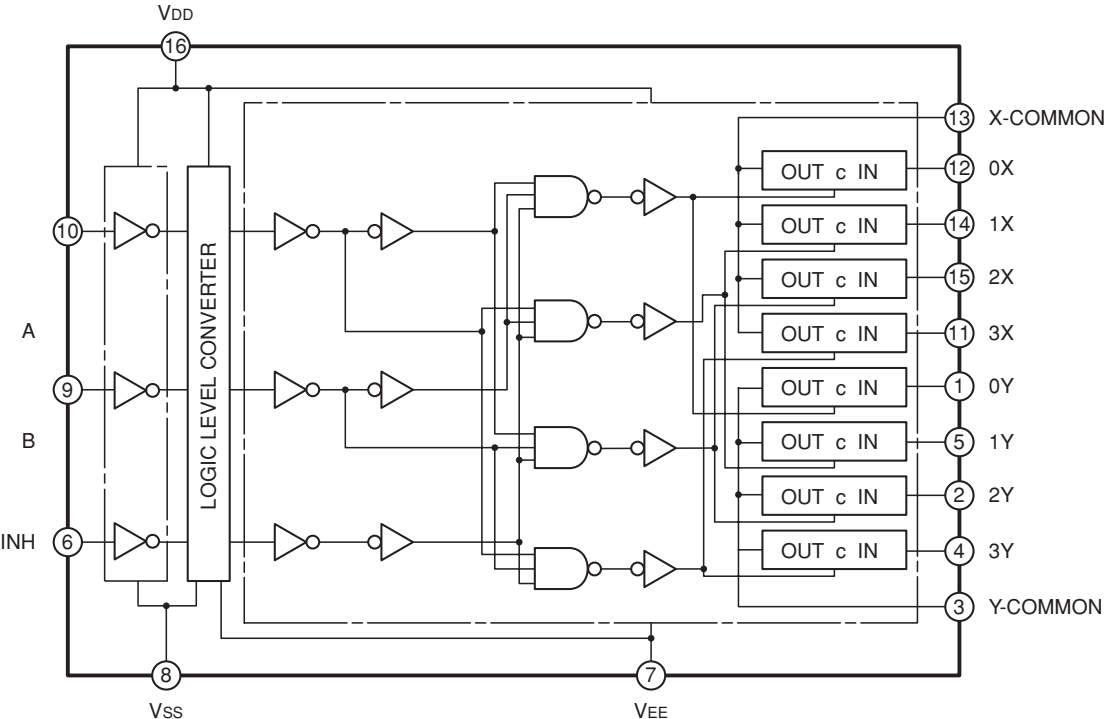
IC201 BA3308 (Pre-Amp.)



IC301 TA8227 (Power Amp.)



IC501 TC4052(Differential 4-Channel Multiplexer)



TUNER ADJUSTMENTS

Use a plastic screw driver for adjustments.

Adjust the intermediate frequency of AM and FM to the frequency of ceramic filter.

Set of unit

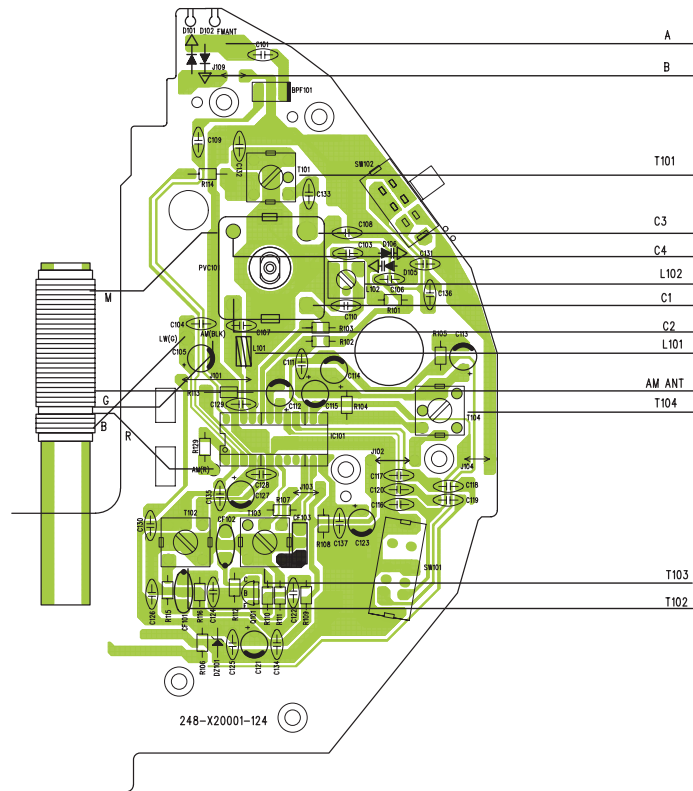
Supply voltage : DC 12.0V

Speaker impedance : 8 ohms

Standard output : 50 mW

Function switch : RADIO

a. Parts Location



a. AM Adjustment

Band switch : AM

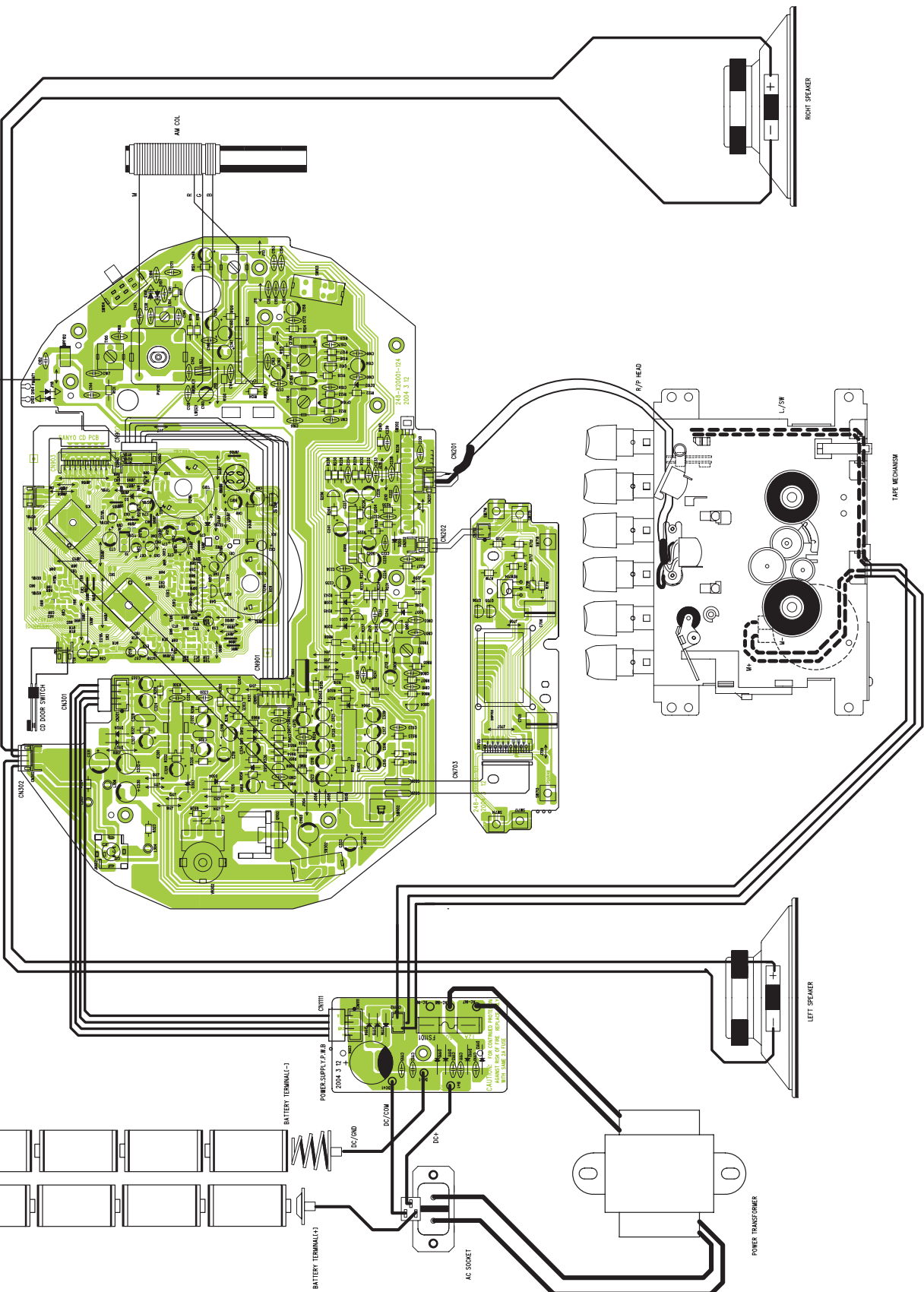
Step	Adjusting Circuit	Connections		SG Frequency	Position of Tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	IF	Closed the output terminal by sweep generator, it place to MW ANT	Connect sweep generator to (19)IC101 (H) 0 and C112(E)	465KHz	Low	T103	
2	Tuning coverage	Connect AM SG to test loop	Connect VTVM to speaker terminals.	515 KHz	Low end	T101	Max.
3				1640 KHz	High end	C3	
4	Tracking	Connect AM SG to test loop	Connect VTVM to speaker terminals	600 KHz	600 KHz	MW ANT	Max.
5				1400 KHz	1400 KHz	C4	

b. FM Adjustment

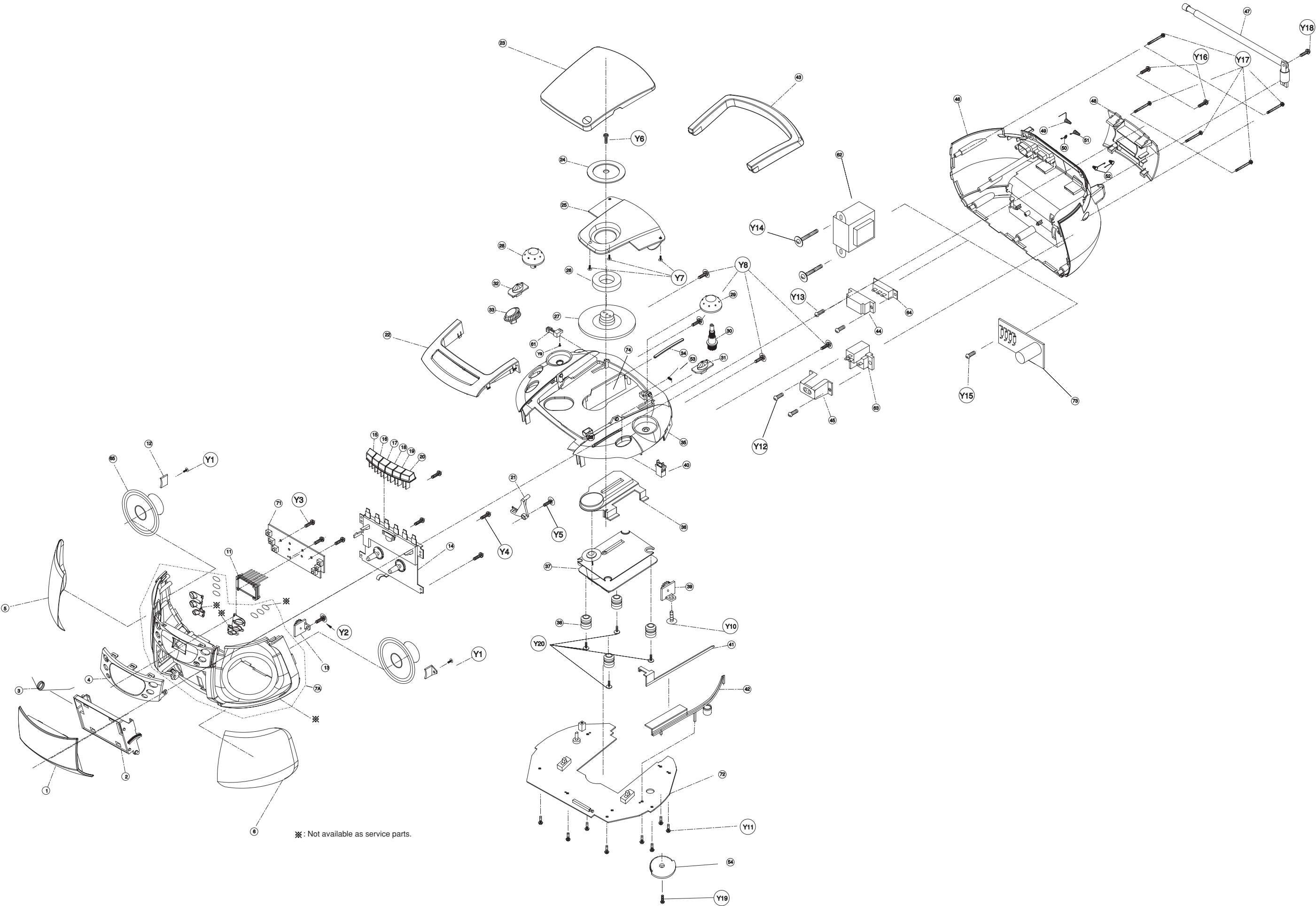
Band switch : FM

FM Dummy antenna : 75 ohms unbalance

Step	Adjusting Circuit	Connection		SG Frequency	position of tuning dial	Adjustment	VTVM Oscilloscope
		Input	Output				
1	IF	Connect sweep generator to IC101 IC101(22)pin (E)	Connect VTVM to generator to (19)PIN IC101(H) and C112(E)	10.7MHz	Low	T104 and T102	
2	Tuning coverage	Connect FM SG to FM ANT(A) & D102(B)	Connect VTVM to speaker terminals.	87.0 MHz	Low end	L102	Max.
3				109.0 MHz	High end	C1	
4	Tracking	Connect FM SG to FM ANT(A) & D102(B)	Connect VTVM to speaker terminals.	90.0 MHz	90.0 MHz	L101	Max.
5				106.0 MHz	106.0 MHz	C2	



This is a basic wiring connection.



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL Δ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATE COMPONENTS IN WHICH SAFETY CAN OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED , USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50V and less than 1000μF of Ceramic type and Electrolytic type.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
	645 071 4986	GIFT BOX((BL)/XE)	29	645 069 7036	KNOB TUNING, ROTARY((BL)/XE)(UK)
	645 071 4979	GIFT BOX(UK)	29	645 071 4771	KNOB TUNING,ROTARY(WH/XE)
	645 071 4993	GIFT BOX(WH/XE)	30	645 069 7180	TUNING KNOB GEAR
	645 069 7319	INSTRUCTION MANUAL((BL)/XE)	31	645 069 7074	KNOB BAND,SLIDE((BL)/XE)(UK)
	645 071 4924	INSTRUCTION MANUAL(UK)	31	645 071 4818	KNOB BAND,SLIDE(WH/XE)
	645 069 7319	INSTRUCTION MANUAL(WH/XE)	32	645 069 7081	KNOB FUNCTION, PUSH((BL)/XE)(UK)
	645 066 6063	POLY BAG,I/B			
	645 070 9296	POLY BAG,PWR CORD	32	645 071 4825	KNOB FUNCTION,PUSH(WH/XE)
	645 069 7357	POLY BAG,UNIT	33	645 069 7050	KNOB BASS,PUSH((BL)/XE)(UK)
	645 069 7388	POLY FOAM, 1KIT 2 PCS LEFT&RIGHT	33	645 071 4795	KNOB BASS,PUSH(WH/XE)
Δ	645 069 6534	POWER CORD,VDE(XE)	34	645 069 7043	DIAL LENS((BL)/XE)(UK)
Δ	645 062 5862	PWR CORD,BSI(UK)	34	645 071 4788	DIAL LENS(WH/XE)
	645 071 4931	QUICK GUIDE(XE)	35	645 071 4856	CABINE TOP((BL)/XE)(UK)
	645 071 4955	RATING PLATE((BL)/XE)	35	645 071 4863	CABINE TOP(WH/XE)
	645 071 4962	RATING PLATE(UK)	36	645 069 6961	CD MECKANISM COVER
	645 071 4955	RATING PLATE(WH/XE)	37	645 069 6893	CD DECK MECHANISM,DA11MM
	645 071 4702	REMOTR CONTROL, RC06-1020S3-490	38	645 033 3446	RUBBER SILICON,FOR CD DECK

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION	REF.NO.	PART NO.	DESCRIPTION
1	645 069 7005	CASS DOOR((BL)/XE)(UK)	42	645 069 6992	POINTER BRACKET
1	645 071 4740	CASS DOOR(WH/XE)	43	645 069 7029	HANDLE((BL)/XE)(UK)
2	645 069 7197	CASS DOOR BRACKET	43	645 071 4764	HANDLE(WH/XE)
3	645 062 0478	CASS DOOR SPRING	45	645 033 0391	AC SKT COVER
4	645 069 7265	DISPLAY LENS((BL)/XE)(UK)	46	645 069 6985	CABINET BACK((BL)/XE)(UK)
4	645 071 4917	DISPLAY LENS(WH/XE)	46	645 071 4733	CABINET BACK(WH/XE)
5	645 070 5304	SPEAKER GRILL LEFT((BL)/XE)(UK)	48	645 069 7012	BATTERY DOOR((BL)/XE)(UK)
5	645 069 7364	SPEAKER GRILL LEFT(WH/XE)	48	645 071 4757	BATTERY DOOR(WH/XE)
6	645 070 5311	SPEAKER GRILL RIGHT ((BL)/XE)(UK)	49	645 070 9319	BATTERY SPRING+
6	645 069 7371	SPEAKER GRILL RIGHT(WH/XE)	50	645 033 0926	BATT SPRING(+)
7A	645 071 4696	ASSY CABINET(WH/XE)	52	645 070 9302	BATTERY SPRING-
7A	645 069 6411	ASSY CABINET((BL)/XE)(UK)	51	645 070 9319	BATTERY SPRING+
11	645 069 7272	LCD BRACKET	53	645 042 0351	CD DOOR SPRING
12	645 069 7241	SPEAKER CLIP L	54	645 069 7173	TUNING DRUM
13	645 033 0407	CASS LID GEAR			
15	645 069 7104	KNOB CASS PAUSE			
16	645 069 7111	KNOB CASS STOP/EJECT			
17	645 069 7128	KNOB CASS FFWD			
18	645 069 7135	KNOB CASS REWIND			
19	645 069 7142	KNOB CASS PLAY			
20	645 069 7159	KNOB CASS RECORD			
21	645 069 7166	RECORDING BRACKET			
22	645 071 4887	DISPLAY PANEL((BL)/XE)(UK)			
22	645 071 4894	DISPLAY PANEL(WH/XE)			
23	645 069 7258	CD DOOR LENS((BL)/XE)(UK)			
23	645 071 4900	CD DOOR LENS(WH/XE)			
24	645 033 3996	CD CHUCK M			
25	645 069 7210	CD DOOR			
26	645 033 3972	CD MAGNET RING			
27	645 033 3989	CD CHUCK A			
28	645 069 7067	KNOB VOLUME, ROTARY((BL)/XE)(UK)			
28	645 071 4801	KNOB VOLUME,ROTARY(WH/XE)			

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y1	645 069 6794	SCREW 3X10,SPEAKER CLIP R
Y2	645 069 6794	SCREW 3X10,CASS DOOR GEAR
Y3	645 023 6594	SCREW ST 3X8,CONTROL PCB-PB
Y4	645 069 6787	SCREW 3X10, TOP CAB TO FRONT CAB
Y5	645 069 6794	SCREW 3X10,SPEAKER CLIP L
Y6	645 069 6770	SCREW 2.6X8,CD DECK
Y7	645 062 1086	SCR 2X5,CD DOOR,
Y8	645 069 6787	SCREW 3X10,CASS DECK
Y9	645 069 6824	SCREW 2X6,LEAF SWITCH
Y10	645 033 0247	SCR 2.6X8,CD DOOR GEAR
Y11	645 023 6594	SCREW ST 3X8,MAIN PCB-PB
Y12	645 027 1144	SCR 2.8X12, AC SKT COVER TO AC SKT-SST
Y14	645 027 1182	SCR 3X20, POWER TRANSFORMER-SST
Y15	645 023 6594	SCREW ST 3X8, RECTIFER BOARD-PB

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION	MAIN P.W.BOARD ASSY
Y16	645 023 6617	SCREW ST 3X10, TOP CAB TO BACK CAB-PB	REF.NO. 72
Y17	645 070 4819	SCREW 3X25, BACK CAB TO FRONT CAB	BPF101
Y18	645 027 1236	SCR 3X8,ROD ANTENNA-SM	C0117
Y19	645 069 6831	SCREW 2.6X6,TUNING DRUM	C0120
Y20	645 069 6770	SCREW 2.6X8,CD DECK	C0201

ELECTRICAL-PARTS

REF.NO.	PART NO.	DESCRIPTION	MAIN P.W.BOARD ASSY
47	645 070 9043	ROD ANTENNA	C0208
61	645 069 6657	LEAF SWITCH,CD LID SW,LS-053-02	C0209
62	Δ 645 071 4719	POWER TRANSFORMER	C0210
63	645 032 9760	AC SOCKET S-1-1225,SW1110,230V	C0211
65	645 069 6558	SPEAKER	C0213
	645 069 6855	6P HSG, MAIN CN901 TO CD BD CN90,2.0MM	C0308
	645 069 6763	FFC CABLE 18P, CTL CN703 TO CD DECK,K 1MM	C0311
	645 054 0707	HSG 3P, RECTI CN1112 TO CASS DEC	C0513
	645 033 3606	FERRITE BEAD, CN901 TO CN902 6P CROSS	C0514
	645 055 7095	FERRITE BEAD, X'FORMER INPUT W CROSS 2	C0802
	645 033 3606	FERRITE BEAD, X'FORMER OUTPUT W CROSS	C0804
	645 055 7255	16P FFC CABLE, CD BD CN901 TO CD DECK	C0806
	645 069 6749	2P HSG, CD BD CN904 TO CD LEAF S	C0959
	645 069 6756	2P HSG, MAIN CN202 TO CTL CN702	C0960
	645 069 6732	4P HSG,MAIN CN 302 TO SPEAKER	CF101
	645 069 6725	4P HSG, MAIN CN201 TO CASS DECK	CF102
	645 069 6848	4P HSG, RECTI CN1111 TO MAIN CN3	CF103

COTORL P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION	MAIN P.W.BOARD ASSY
71	614 331 9757	ASSY,PWB,CONTROL	CN201
C0703	645 034 9669	ELECT CAP 100 UF/10V	CN302
CN703	645 069 6701	FFC HEADER 18P,18P 1MM	D0101
Q0701	645 023 6129	TR 9014C	D0102
Q0702	645 023 6129	TR 9014C	D0105
REM701	645 033 3477	DIODE RPM-6938-V4	D0201
SW701	645 069 6640	SWITCH TACT,MEMORY	D0202
SW702	645 069 6640	SWITCH TACT,SKIP+	D0203
SW703	645 069 6640	SWITCH TACT,STOP	D0204
SW704	645 069 6640	SWITCH TACT,PALY	D0301
SW705	645 069 6640	SWITCH TACT,SKIP-	D0302
SW706	645 069 6640	SWITCH TACT,REPEAT	D0501
	645 069 7272	LCD BRACKET	D0502
	645 069 6671	LCD DISPLAY,9P 30X20.5MM	D0908
			D0909
			D0910
			D1117
			D1118
			DZ101
			IC101
			IC201
			IC301
			IC501
			JK601
			L0101
			L0102
			PVC101
			Q0101
			Q0201
			Q0202
			Q0203
			Q0301
			Q0302
			Q0801
			Q0802
			Q0905
			Q0906
			Q1101
			SW101
			SW102
			SW201
			SW301
			SW501
			T0101
			T0102
			T0103
			T0104

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
T0801	645 027 0307	BIAS COIL, AC BIAS 3630-BLACK,10MM
VR301	645 042 0085	ROTARY VR,50K
	645 042 0344	CONTACT PIN,FM ANT,1MM
	645 061 9946	1P HSG,FM ANT
	645 042 0337	HEAT SINK,FOR MAIN BD.IC301, 41X22X0.4MM
	645 069 6404	ASSY BAR ANT

POWER SUPPLY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 331 2499	ASSY,PWB,RECTIFIER(Only initial)
C1114	403 135 5702	ELECT 4700U M 25V,HW SERIES
D1110	645 023 6112	RECTIFIER 1N-4001
D1111	645 023 6112	RECTIFIER 1N-4001
D1112	645 023 6112	RECTIFIER 1N-4001
D1113	645 023 6112	RECTIFIER 1N-4001
D1114	645 023 6112	RECTIFIER 1N-4001
D1115	645 023 6112	RECTIFIER 1N-4001
D1116	645 023 6112	RECTIFIER 1N-4001
FS1101	645 054 0639	FUSE GLASS TUBE,2A 250V
CN1111	645 027 0611	WAFER 4P,2.5MM,PITCH
CN1112	645 033 3682	HEADER 3PINS,JST,2MM PITCH
	645 035 0511	FUSE HOLDER MW1010K, FOR FS1101,406-050090-000
	645 027 1298	EYELET

CD P.W.BOARD ASSY

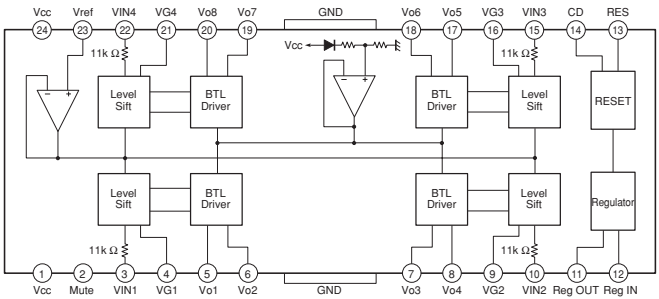
REF.NO.	PART NO.	DESCRIPTION
74	614 331 2505	ASSY,PWB,CD(Only initial)
CN901	645 069 6688	HEADER FFC 16P,16P 1MM
CN902	645 051 6542	6P HEADER,2MM
CN903	645 069 6695	HEADER FFC 18P,18P 1MM
CN904	645 051 6511	2P HEADER,2MM
D0901	645 023 6099	DIODE 1N-4148
D0902	645 023 6099	DIODE 1N-4148
IC901	645 055 8436	IC LA9242M
IC902	645 069 6633	IC LC78601RE
IC903	645 069 6879	IC LA6541D
L0901	645 042 0108	CHOKE COIL 26UH,26UH
L0902	645 069 6886	INDUCTOR 2.7UH,2.7UH CHIP 0805
L0903	645 069 6886	INDUCTOR 2.7UH,2.7UH CHIP 0805
L0904	645 069 6886	INDUCTOR 2.7UH,2.7UH CHIP 0805
L0905	645 069 6886	INDUCTOR 2.7UH,2.7UH CHIP 0805
Q0901	645 061 8246	TR 2SA608NFNPAAT
Q0902	645 033 3514	TR 2SB764D
Q0903	645 069 6862	TRANSISTOR 2SA1342
Q0904	645 069 6862	TRANSISTOR 2SA1342
X0901	645 061 9915	RESONATOR 16.9344MHZ, 16.9344MHZ
	645 042 0320	HEAT SINK,FOR CD BD IC903, 36X23X1.2MM

TAPE DECK MECHANISM

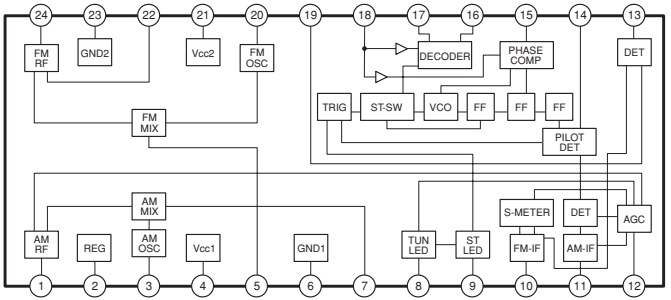
REF.NO.	PART NO.	DESCRIPTION
14	645 050 1814	CASS DECK MECHANISM, P21VB-A83-2L1F4
	645 050 2101	ASSY,MOTOR
	645 068 7976	ASSY,PINCH ROLLER
	645 050 1784	MAIN BELT
	645 050 1395	RF BELT,34 X 1 X 1
	645 018 0637	R/P HEAD,TC-915
	645 030 6839	E HEAD

IC BLOCK DIAGRAM & DESCRIPTION

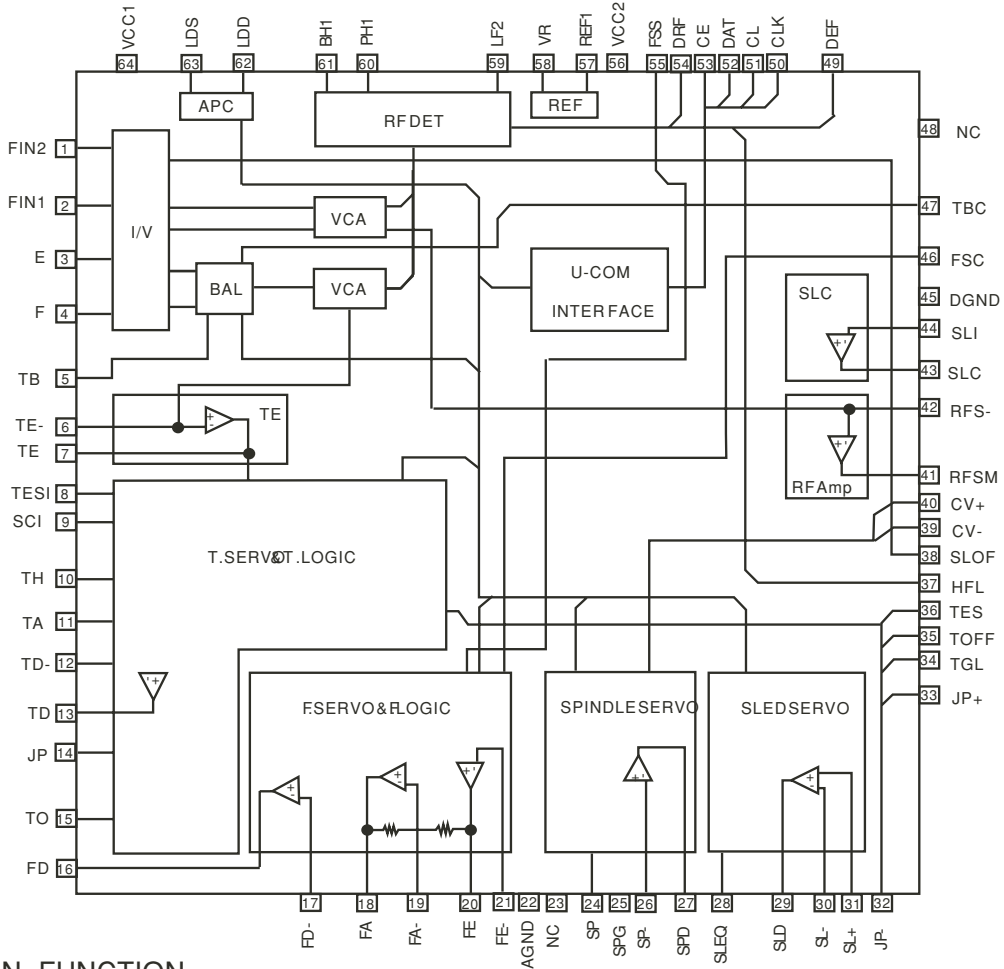
IC903 LA6541 (CD Driver)



IC101 LA1824 (Tuner)



IC901 LA9242M (Servo)

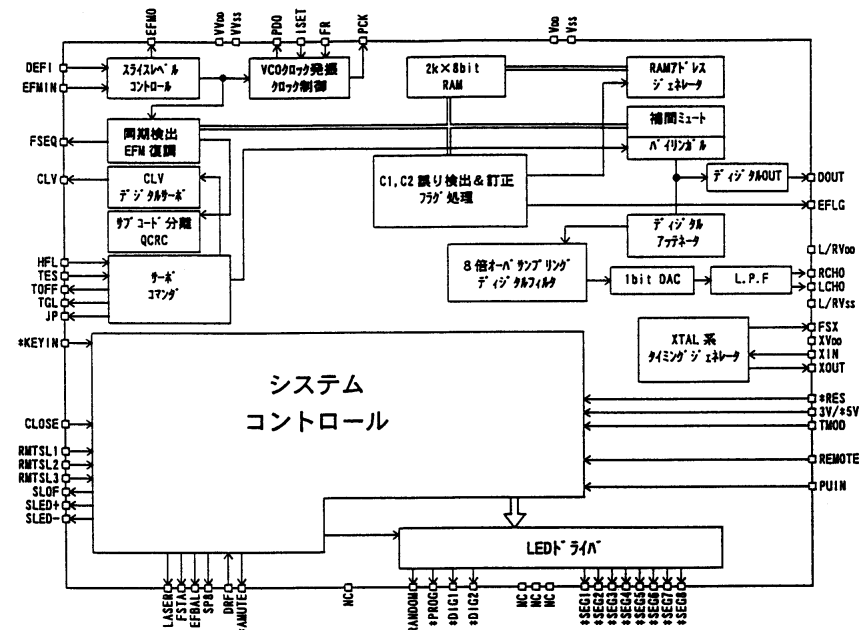


PIN FUNCTION

1	FIN2	11	TA	21	FE-	31	SL+	41	RFSM	51	CL	61	BH1
2	FIN1	12	TD-	22	AGND	32	JP-	42	RFS-	52	DAT	62	LDD
3	E	13	TD	23	NC	33	JP+	43	SLC	53	CE	63	LDS
4	F	14	JP	24	SP	34	TGL	44	SLI	54	DRF	64	Vcc1
5	TB	15	TO	25	SPG	35	TOFF	45	DGND	55	FSS		
6	TE-	16	FD	26	SP-	36	TES	46	FSC	56	Vcc2		
7	TE	17	FD-	27	SPD	37	HFL	47	TBC	57	REF1		
8	TESI	18	FA	28	SLEQ	38	SLOF	48	NC	58	VR		
9	SCI	19	FA-	29	SLD	39	CV-	49	DEF	59	Lf2		
10	TH	20	FE	30	SL-	40	CV+	50	CLK	60	Ph1		

IC BLOCK DIAGRAM & DESCRIPTION

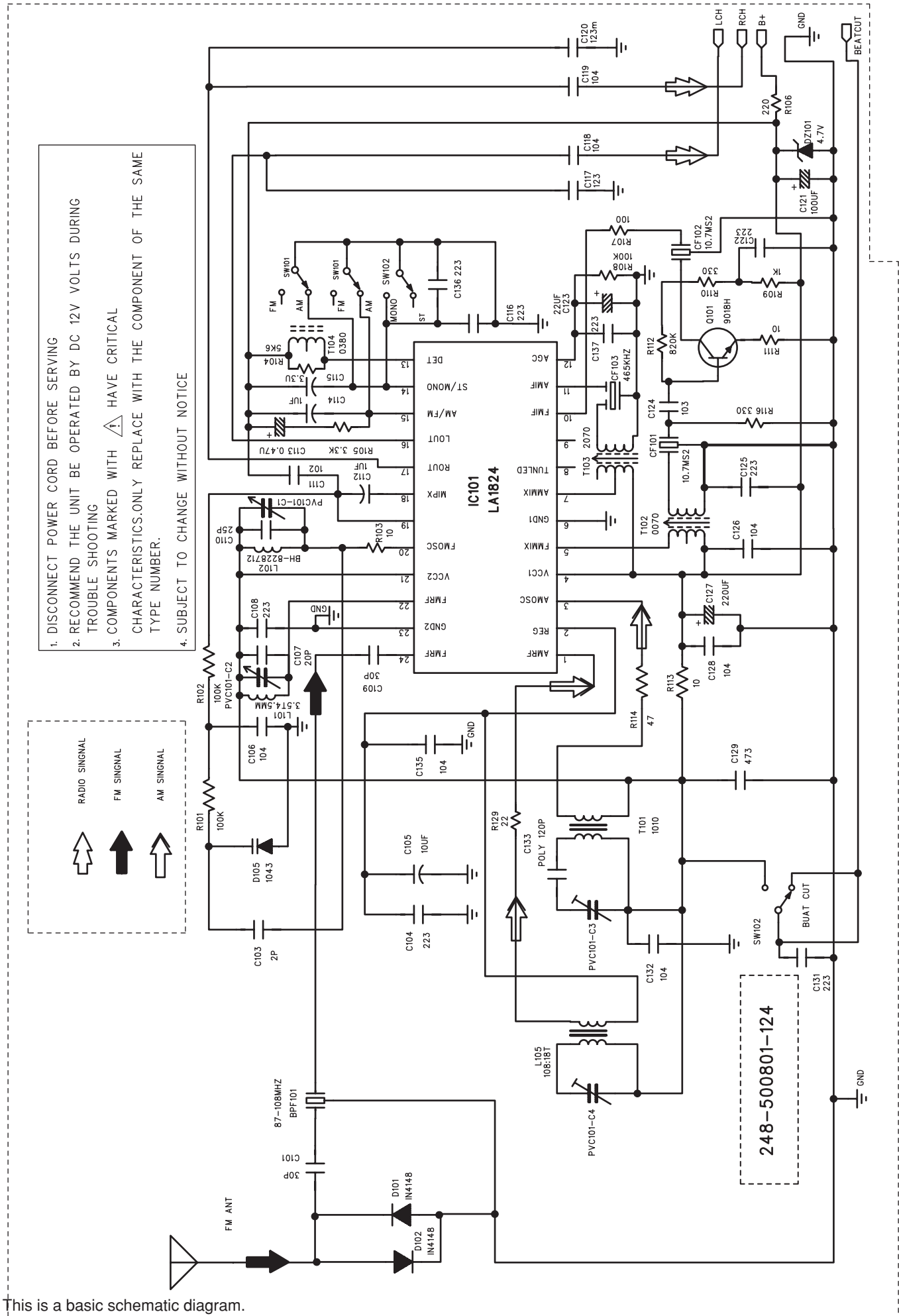
IC902 IC78601RE (ANALOG SIGNAL PROCESSOR)



No.	Pin Name	Function
1	DEF1	It is junction in unused time, 0 V defect detecting signal (DEF) input terminal
2	3V / *5V	It is 5 V use 3 V use, L H power supply voltage selection input terminal.
3	PDO	The phase comparison output terminal for outside VCO control(PLL control)
4	VVss	Earth terminal for internal organs VCO control , connecting it to 0 V by all means
5	ISET	Resistance connection terminal for electric current adjustment of PDO output
6	VVdd	Power supply terminal for internal VCO control
7	FR	VCO frequency range adjustment control
8	Vss	Digital series earth terminal. Being connected to 0 V by all means.
9	EFMO	EFM signal output terminal.(Slice level control)
10	EFMIN	EFM signal input terminal.(Slice level control)
11	TMOD	Input terminal for a test. (Being connected to 0 V by all means)
12	CLV	The output terminal for disk motor control. 3 value output
13	HFL	Truck detecting signal input terminal.
14	TES	Tracking error signal input terminal.
15	TOFF	Tracking OFF output terminal
16	TGL	The output terminal for tracking gain change. (Go up gain with L)
17	JP	The output terminal for tracking jump control. (3 value output)
18	LASER	Laser control terminal. (The pull-down resistor internal)
19	FSTA	The FS TA control terminal. (The pull-down resistor internal)
20	EFBAL	EFBAL control terminal. (The pull-down resistor internal)
21	SP8	SP 8 control terminal. (The pull-down resistor internal)
22	Vdd	Digital series power supply terminal
23	FSEQ	The synchronising signal search output terminal. When synchronising signal of inside creation agreed with the synchronising signal which detected it from EFM signal, it become "H"
24	PCK	Clock monitor terminal for EFM data reproduction. (Limited at the time of test mode but)
25	SLOF	Thread OFF control output terminal
26	SLED+	The thread field output terminal
27	SLED-	The thread field output terminal
28	PUIIN	Limit switch sensing input terminal. (The pull-up resistor internal)
29	DOUT	Digital OUT output terminal. (EIAJ format)
30	NC	NC (Being open)
31	*SEG8	The segment output (8) terminal. (The pull-up resistor internal)
32	*SEG7	The segment output (7) terminal. (The pull-up resistor internal)

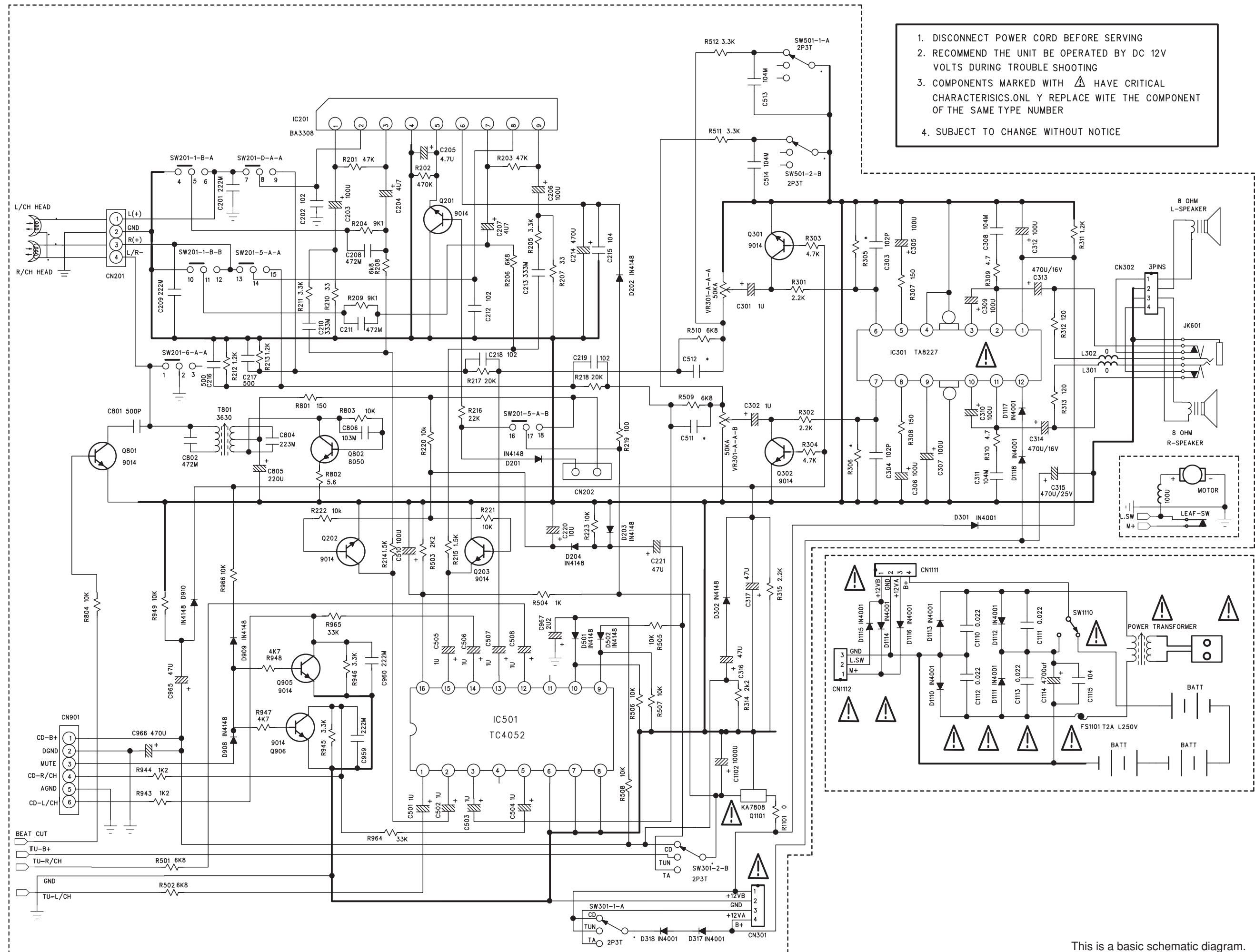
No.	PIN NAME	Function
33	*SEG6	The segment output (6) terminal. (The pull-up resistor internal)
34	*SEG5	The segment output (5) terminal. (The pull-up resistor internal)
35	*SEG4	The segment output (4) terminal. (The pull-up resistor internal)
36	*SEG3	The segment output (3) terminal. (The pull-up resistor internal)
37	*SEG2	The segment output (2) terminal. (The pull-up resistor internal)
38	*SEG1	The segment output (1) terminal. (The pull-up resistor internal)
39	Vcc	Digital series earth terminal. (It is connection in 0 V by all means)
40	NC	NC
41	*DIG2	The common drive output (2) terminal.The pull-up resistor internal
42	*DIG1	The common drive output (1) terminal.The pull-up resistor internal
43	*PROG	Program movement monitor output terminal. (The pull-up resistor internal)
44	*KEYIN	Key matrix input terminal. (The pull-up resistor internal)
45	NC	NC (Being open)
46	NC	NC (Being open)
47	*RANDOM	Random mode display output terminal
48	RMTSL3	The wireless remote controller identification input (3) terminal
49	EFLG	C1 , C2 , 1 fold , 2fold Correction monitor
50	FSX	7.35KHz synchronizing signal output terminal which did dividing from OSC. As a condition, Limited at the time of test mode
51	*AMUTE	audio , Mute output signal
52	REMOTE	Wireless remote controller signal input terminal
53	RMTSL2	Wireless remote controller identification input(2) terminal
54	LCHO	D/A , L channel output terminal
55	L/R Vdd	D/A control power source terminal
56	L/RVss	D/A control earth terminal. (It is connection in 0 V by all means)
57	RCHO	D/A , R channel output terminal
58	CLOSE	Closing switch sensing input terminal. The pull-up resistor internal
59	RMTSL1	Wireless remote controller identification input(1) terminal. (The pull-up resistor internal)
60	Xout	Connection terminal of 16.9344 MHz crystal OSC
61	Xin	Connection terminal of 16.9344 MHz crystal OSC
62	XVdd	Power supply terminal for crystal OSC
63	*RES	Reset input terminal
64	DRF	DRF input terminal

SCHEMATIC DIAGRAM (TUNER)

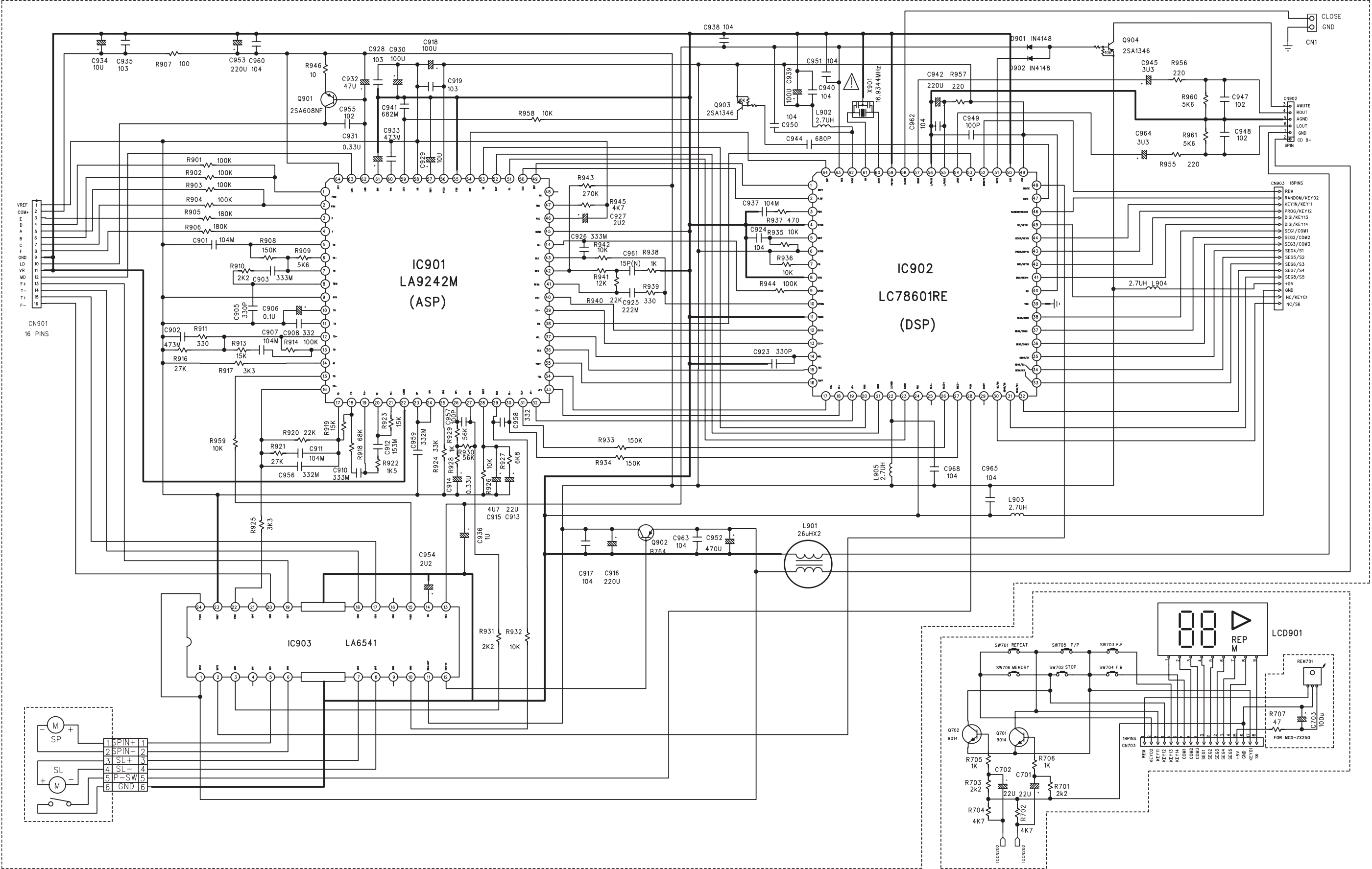


This is a basic schematic diagram.

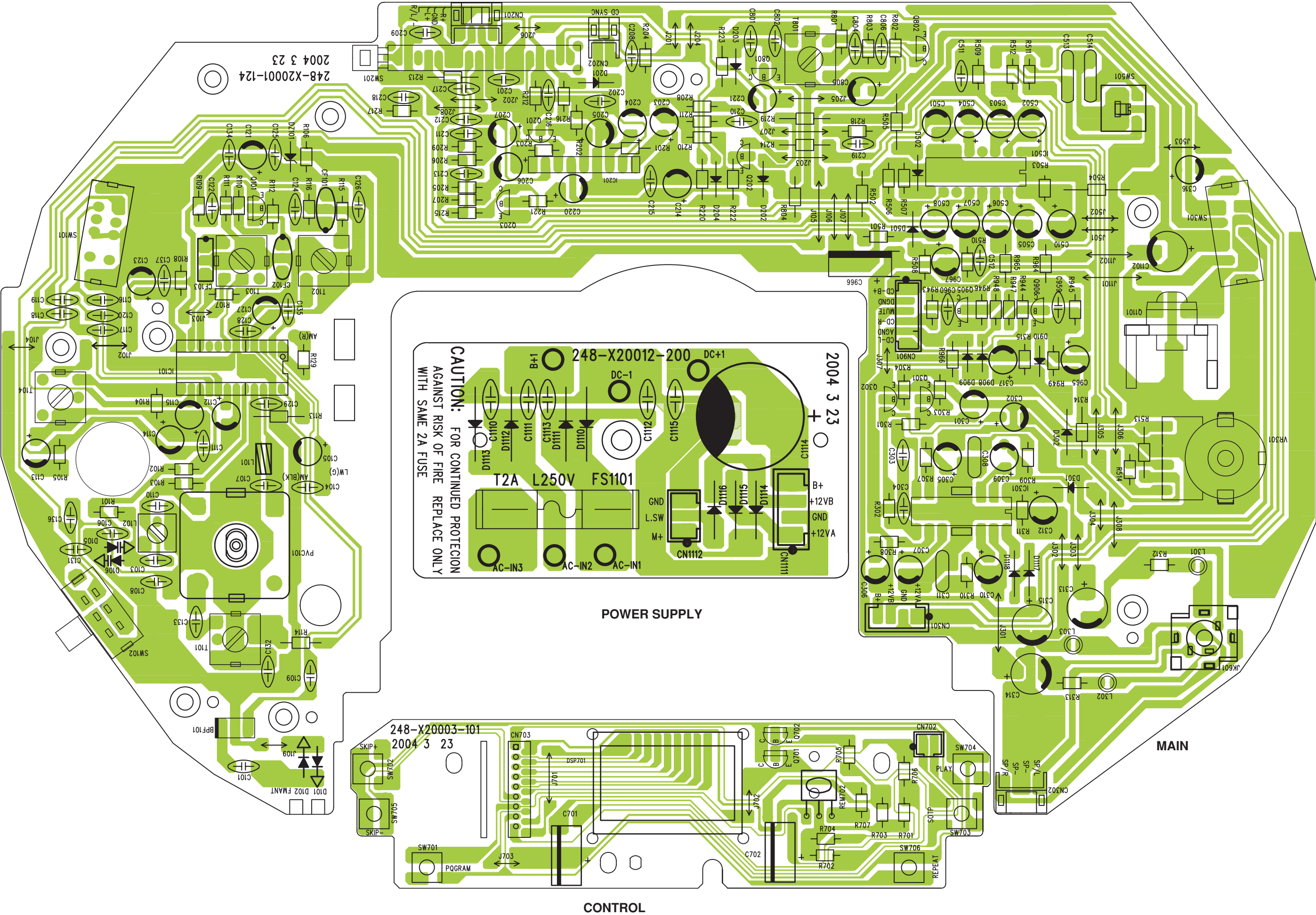
SCHEMATIC DIAGRAM (MAIN)

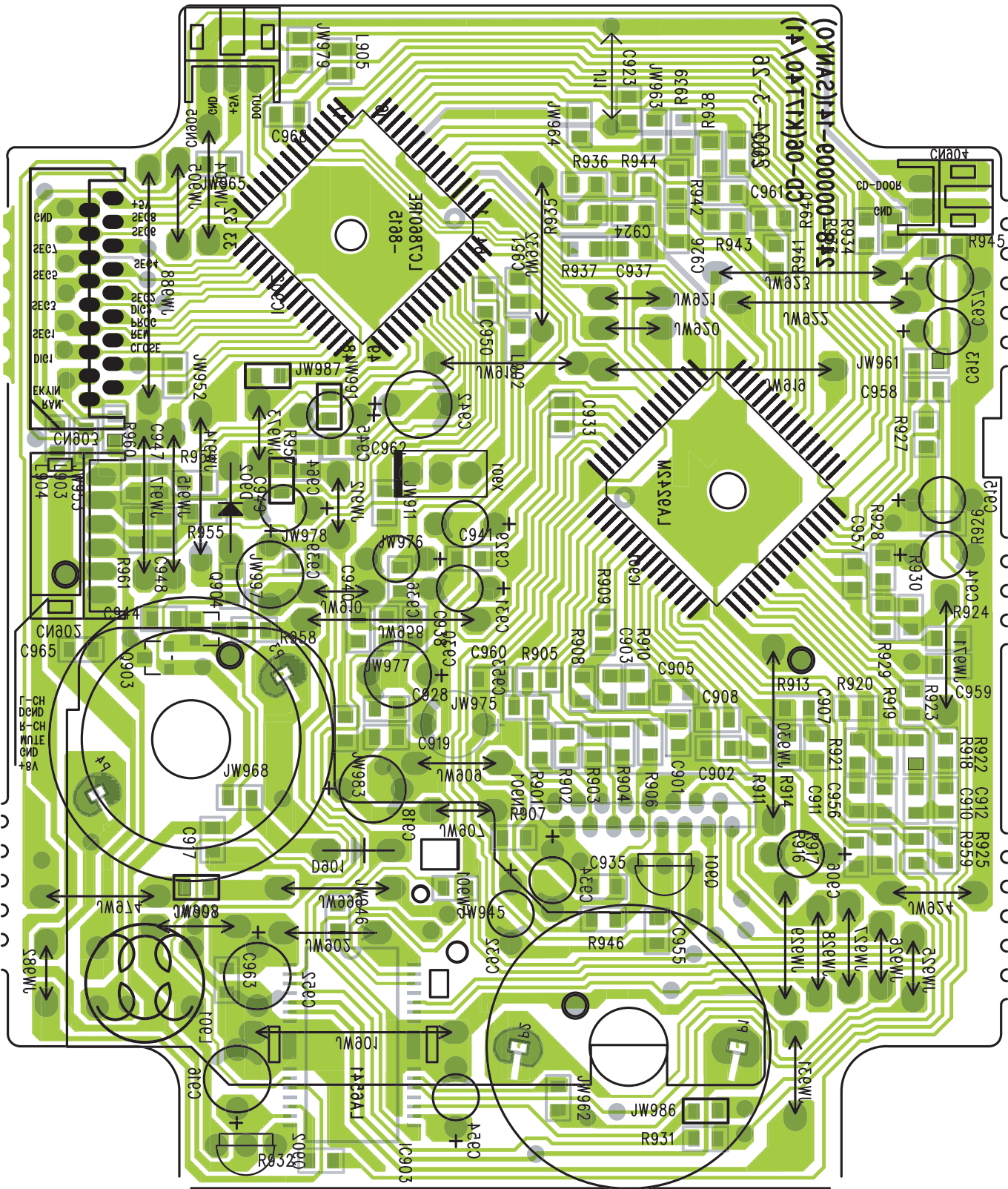


SCHEMATIC DIAGRAM (CD)

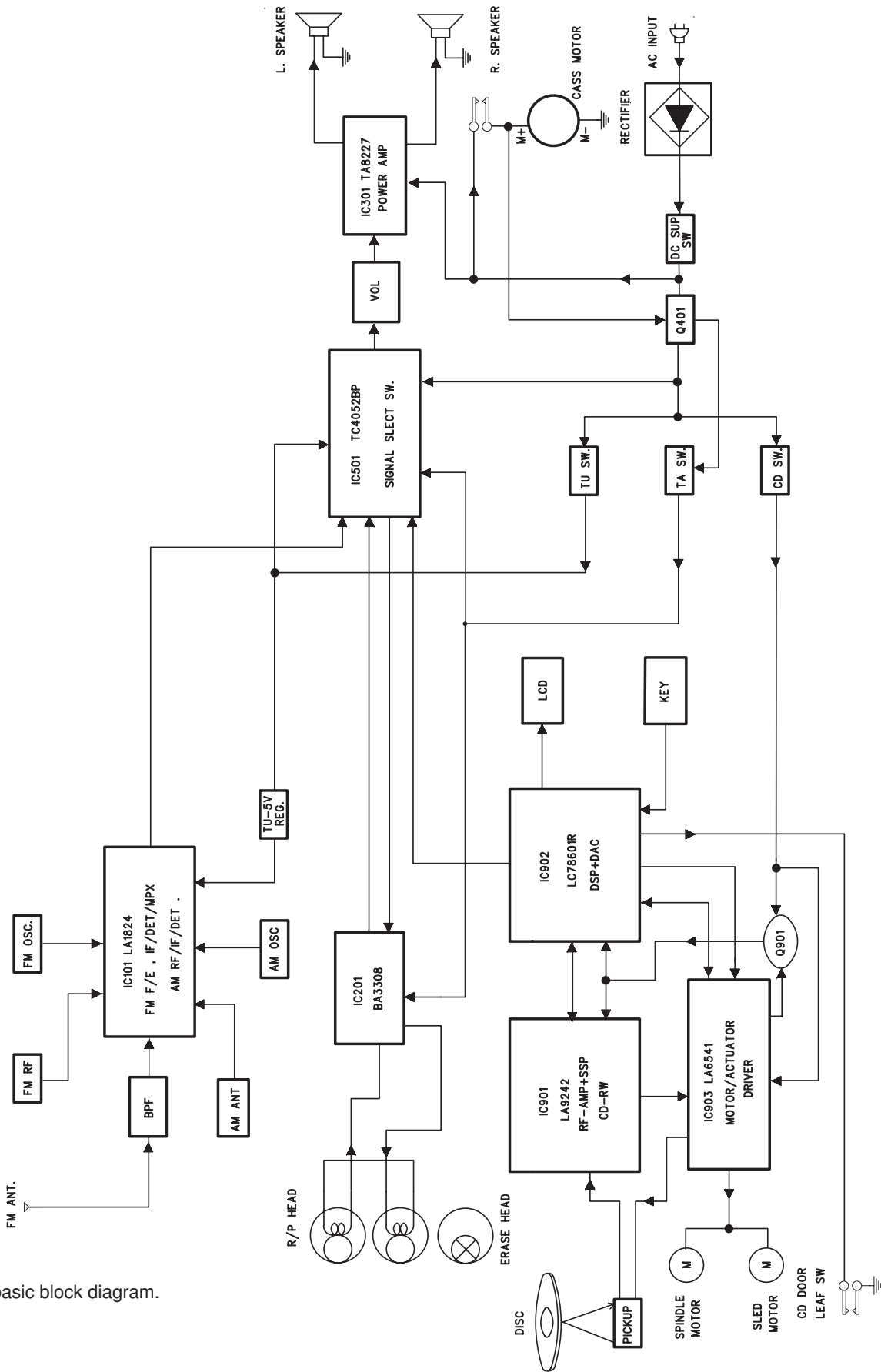


This is a basic schematic diagram.





This is a basic wiring diagram.



This is a basic block diagram.



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